AN ON-CHIP REALTIME CLOCK MODULE

ABSTRACT OF THE DISCLOSURE

A real time clock module maintains operating and timing
5   parameters in "non-volatile" or persistent memory when an
integrated circuit is powered down. The real time clock module
provides is divided into an analog and a digital domain. The
analog domain contains a number of persistent registers to store
operational parameters and timing parameters. These persistent
10   registers are powered by a battery and receive a timing clock
signal from a crystal oscillator. A clock domain-crossing module
operably couples to the persistent registers and allows the
analog domain and the digital domain to be synchronized. An
input buffer receives the operational and timing parameters for
15   the persistent registers from the digital domain and an output
buffer allows the. digital domain to retrieve the operational
parameters and timing parameters from the persistent registers
according to the clock crossing domain module.